

# NOBORI 1 – Phase 1 Final 5 Years Results

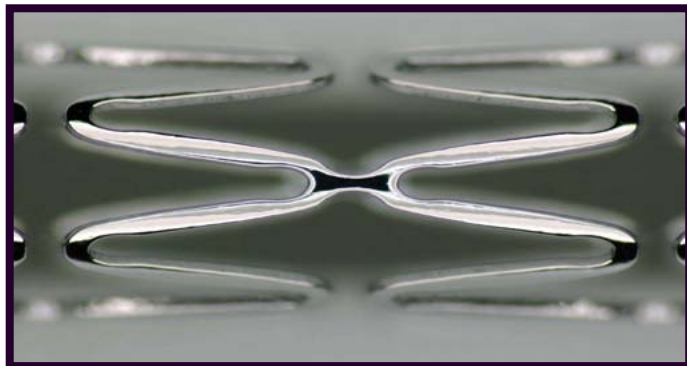
# Potential conflicts of interest

/// I have the following potential conflicts of interest to report:

- /// Research contracts
- X Consulting
- /// Employment in industry
- /// Stockholder of a healthcare company
- /// Owner of a healthcare company
- /// Other(s)

/// I do not have any potential conflict of interest

# Nobori DES Components

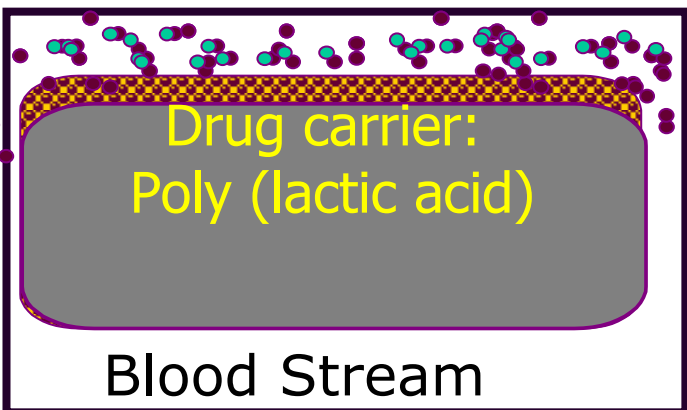


## BMS Platform

**Excellent Flexibility and Scaffolding**

**Optimal Side Branch Access**

**Innovative delivery system with hydrophilic M-coating**



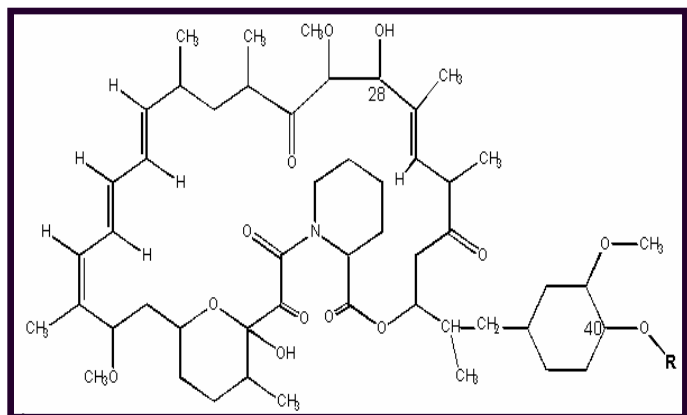
## PLA Biodegradable Polymer

**Abluminal coating**

**Controlled biodegradability**

**Precise drug release kinetics**

**Simultaneous release of drug and polymer degradation**



## Biolimus A9™ (rapamycin derivative)

**A potent new “Limus” designed for stent applications**

**Powerful anti-proliferative, anti-inflammatory properties**

**Prevents smooth muscle cell proliferation**

**Highly lipophilic with optimal local tissue uptake**

# NOBORI 1 Study Design

**2:1 randomization**  
**Single blind - two vessel – staging allowed**

Up to two lesions in two epicardial vessels  
Vessel diameter: 2.5-3.5 mm  
Lesion length: <25 mm  
Pre-dilatation required

**Nobori Arm**  
Phase 1 (n=85)  
Phase 2 (n=153)

PI: Dr B. Chevalier  
N = 363 patients  
29 sites  
Europe, Asia, Australia  
Clinical  
endpoints

**Control Taxus Arm**  
Phase 1 (n= 35)  
Phase 2 (n= 90 )

**Clinical/MACE**

30d

4mo

9mo

12mo

2yr

3yr

4yr

5yr

**Angio/IVUS**

QCA  
IVUS

**Primary endpoint: In-stent late lumen loss by QCA at 9 months**  
**Secondary endpoints: In-segment late loss, BAR, Key IVUS Parameters**  
**MACE (Death, MI, TVR) TLR, TVF at 9 months and ABR at 9 months, Procedure, Lesion success, Drug therapy: ASA and clopidogrel 6 months**

## Study Sites and Investigators

### Australia:

- Adelaide
- Melbourne

S. Worthley  
I. Meredith

### Belgium:

- Liege
- Aalst
- Brussels

V. Legrand  
W. Wijns  
K. Erard

### Denmark:

- Aarhus

L. Thuesen

### France:

- St Denis
- Toulouse
- Paris
- Massy
- Quincy
- Caen
- Toulouse

B. Chevalier  
J. Marco  
E. Teiger  
MC. Morice  
P. Garot  
M. Hamon  
D. Carrie

### Korea:

- Seoul

S-J Park

### Germany:

- Bad Soden
- Munich
- Bad Nauheim
- Munich
- Leipzig
- Frankfurt
- Trier

N. Reifart  
S. Silber  
C. Hamm  
T. Schiele  
G. Schuler  
B. Nowak  
K. Hauptmann

### The Netherlands:

- Rotterdam
- Zwolle
- Eindhoven

P. Serruys  
H. Suryapranata  
H. Bonnier

### Spain:

- Madrid
- Barcelona

E. Garcia  
A. Serra

### UK:

- London
- Manchester
- Brighton

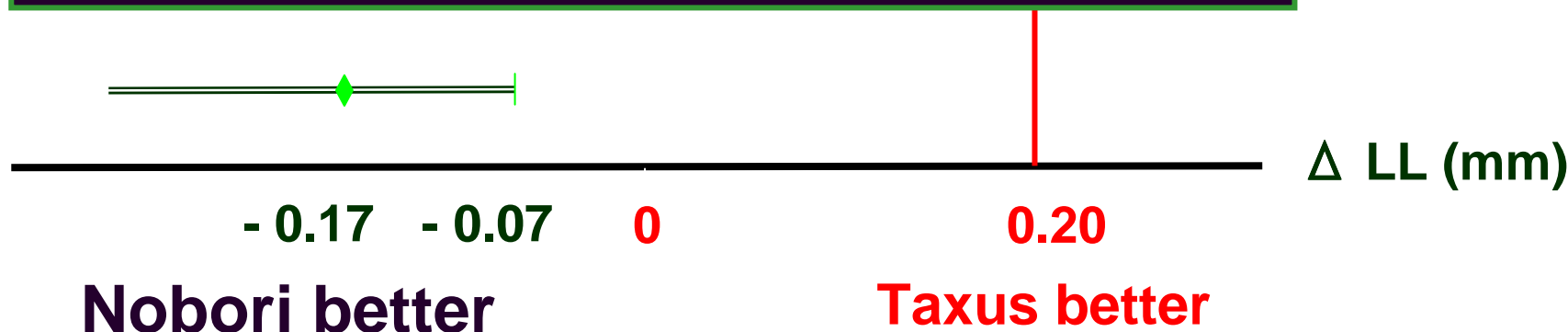
M. Thomas  
F. Fath-Ordoubadi  
D. Hildick-Smith

# Baseline Patient Characteristics

Patient characteristic	Nobori Arm N=238	Taxus Arm N=125	P-value
Age (years)	63.2±10.6	62.9±10.0	0.78
Sex: male	72.7	68.0	0.39
Previous MI	23.5	28.0	0.37
Previous PTCA/CABG	24.7	20.6	0.67
Diabetes mellitus	16.8	27.2	0.03
insulin dependent	7.6	3.2	
non insulin dependent	9.2	24.0	
Hypertension	65.6	68.0	0.73
Hypercholesterolemia	69.8	74.4	0.39
Smoking history	59.5	52.8	0.22
Stable angina	71.8	71.6	0.96
Unstable angina	28.2	28.4	

Numbers are % or mean±SD

- Assumed in-stent Late Loss (LL)
  - ✓ 0.39 mm for Taxus® / 0.34 mm Nobori
  - ✓ Assumed SD: 0.50 mm
- Delta non-inferiority margin: 0.20mm



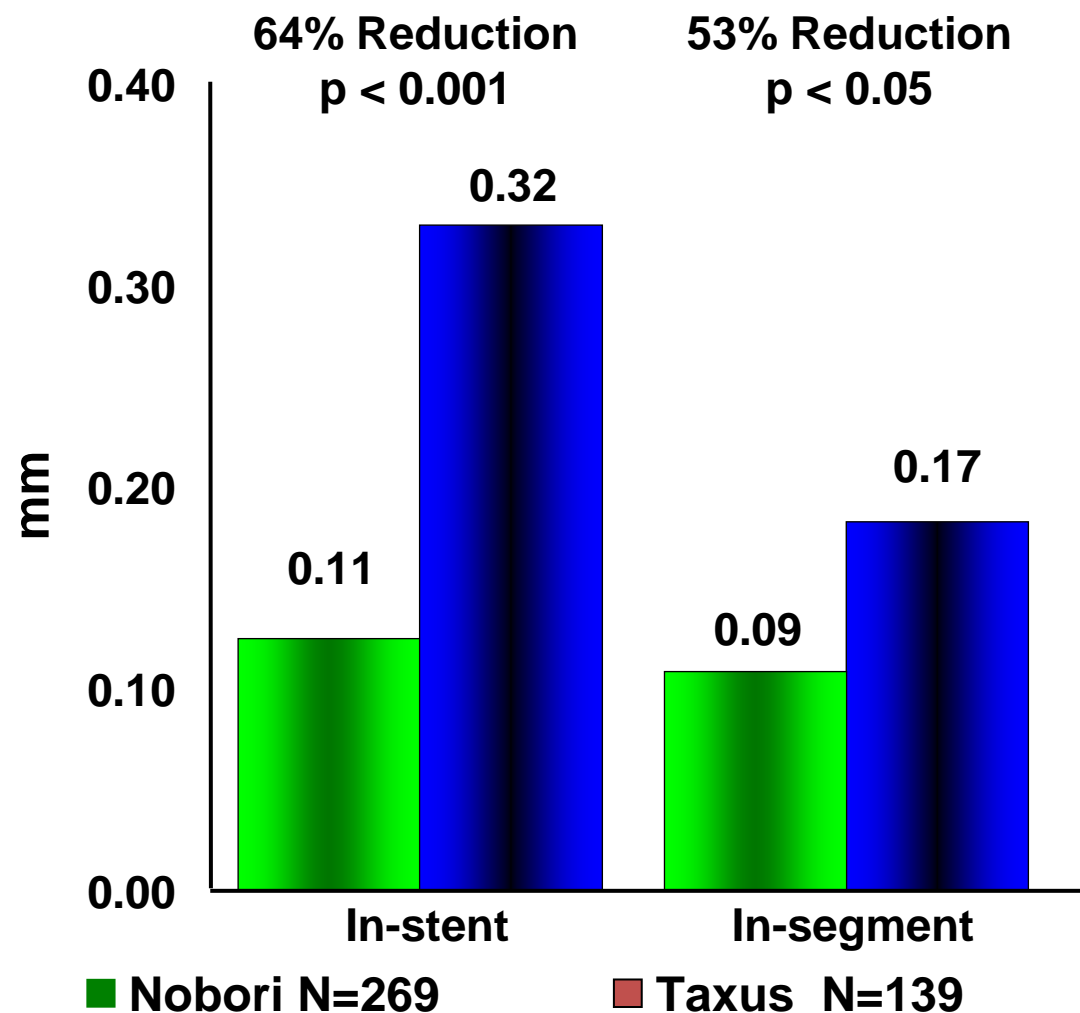
## Late Loss result

- ✓  $0.32 \pm 0.33$  mm Taxus
- ✓  $0.15 \pm 0.27$  mm Nobori

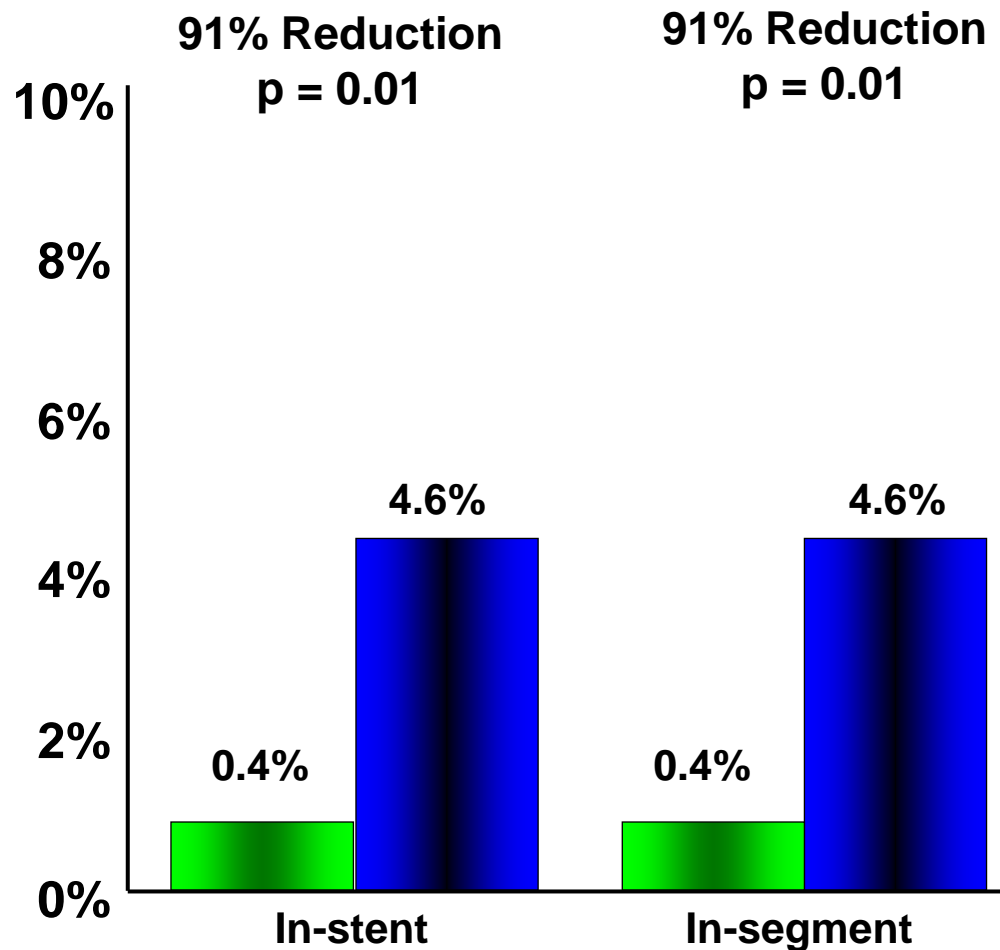
**Result:**  
**Nobori = NON-INFERIOR  $p < 0.001$**

# Key Angiographic Findings at 9 months

## Late Loss



## Binary Restenosis

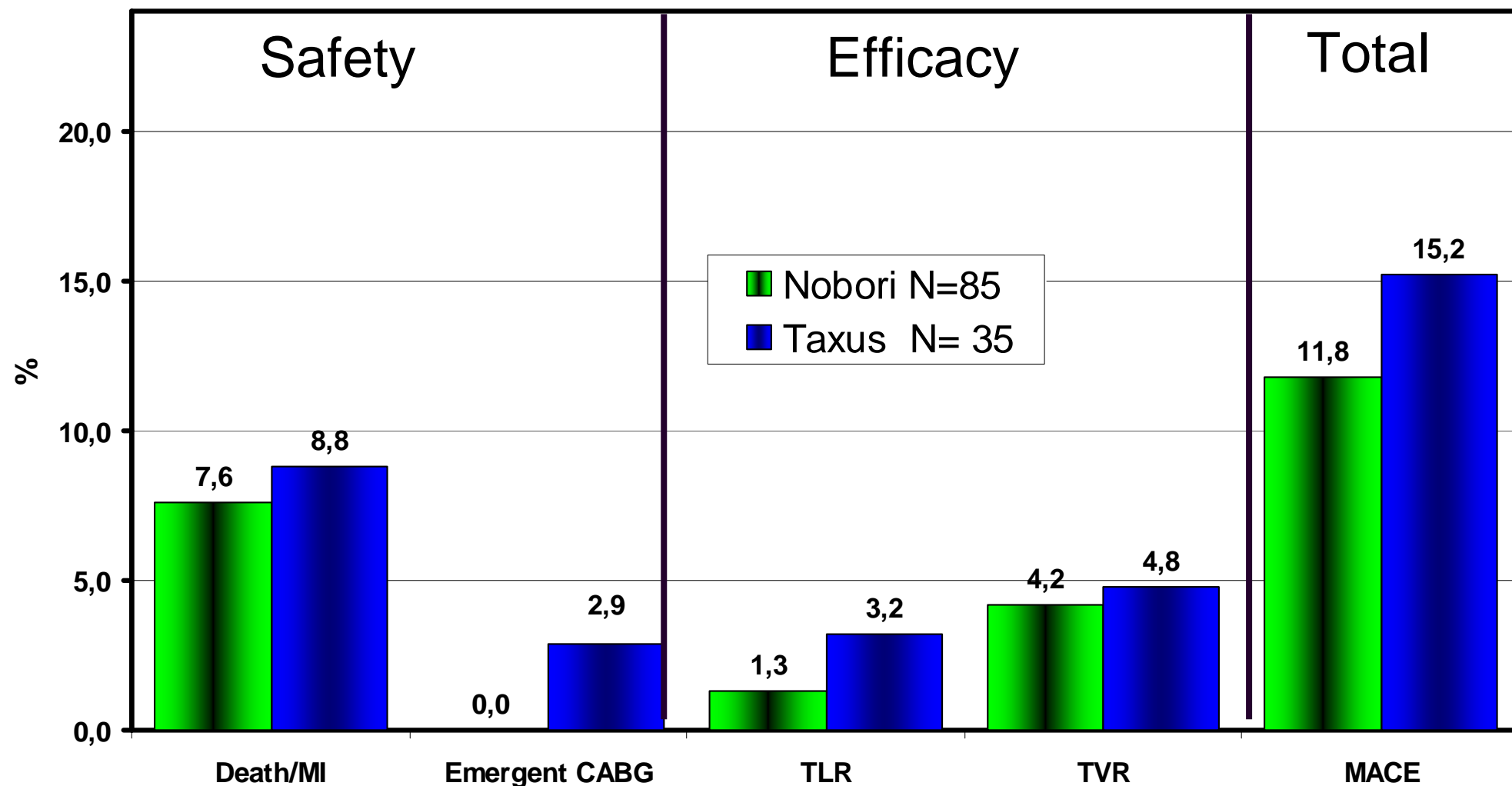


## Main IVUS Findings at 9 months

IVUS	N =101 Nobori	N =53 Taxus	P value
Volume obstruction (%)	1.93±5.54	6.76±8.04	<0.001
Neointimal hyperplasia (mm <sup>3</sup> )	3.11±8.84	13.50±20.4	0.003
Mean plaque area (mm <sup>2</sup> )	0.15±0.48	0.52±0.64	<0.001

# Adverse Events at 3 Years

## Pooled data both phases



MACE = Death, MI, TVR

# Clinical Outcomes at 5 Years

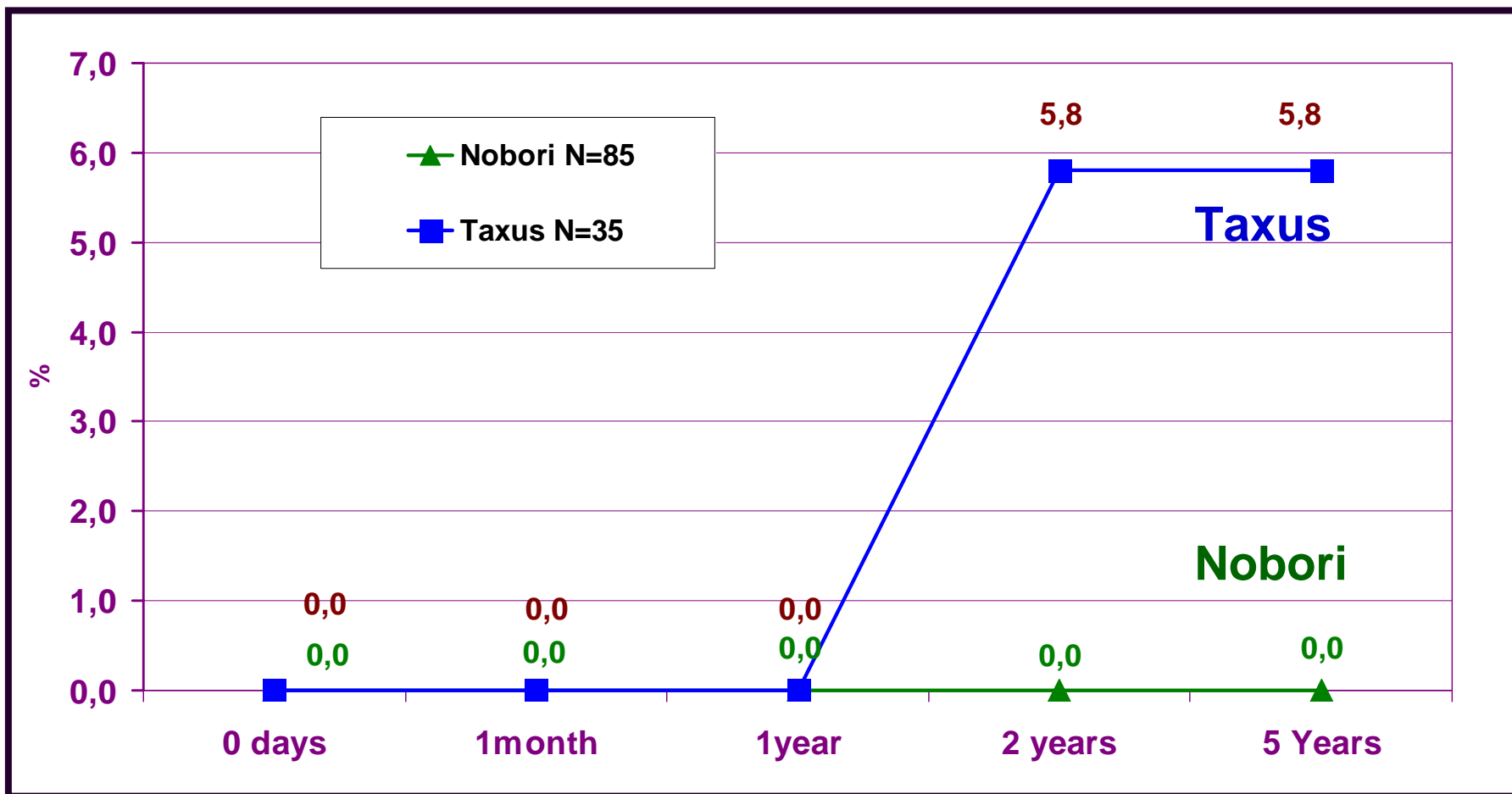
	Nobori N=76	Taxus N=30
Angina Status		
No Angina, %	90.7	86.7
Stable Angina, %	9.3	10.0
Unstable Angina, %	0.0	3.3
Dual Antiplatelet Therapy, %	18.0	7.0

# Adverse Events Up to 5 Years Follow-up

All Events (%)	Nobori Arm N=85	Taxus Arm N=35
Cardiac Death	5.9	5.7
MI - Total	5.9	14.3
MI Q Wave	1.2	5.7
MI Non-Q Wave	5.9	8.6
CABG – TV related	1.2	2.9
TL Re-PCI-Clinically driven	0.0	8.6
TV-non-TL Re-PCI-Clinically driven	3.5	5.7
Non-Target Vessel Revascularization	14.1	11.4
MACE - hierarchical	14.1	22.9
Target Vessel Failure	12.9	20.0

MACE = Cardiac Death, MI, TVR  
TVF=Cardiac death, MI-TV related, TVR

# Stent Thrombosis at 5 years



Stent thrombosis = Definite and Probable according to ARC definition

- Final 5 years results of NOBORI 1 study showed preserved efficacy of Nobori DES and give indication about good safety
- Five years after stent implantation
  - 86% of the patients treated with Nobori stent were free of major adverse cardiac events
  - No stent thrombosis in Nobori arm
  - No TLR in Nobori arm
- Biodegradable polymer, abluminal coating, good healing process observed in animal studies, and reported better preservation of endothelial function with Nobori stent, could contribute to this excellent findings
- Ongoing large studies with more complex patients population continue to show similar trend observed in this first clinical trials